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Scope: Medicaid

SPECIALTY GUIDELINE MANAGEMENT

Adalimumab Products: Hadlima (adalimumab-bwwd), adalimumab-adaz, adalimumab-fkjp)

POLICY

I. INDICATIONS

The indications below including FDA-approved indications and compendial uses are considered a covered benefit provided that all the approval criteria are met, and the member has no exclusions to the prescribed therapy.

A. FDA-Approved Indications

1. Reducing signs and symptoms, inducing major clinical response, inhibiting the progression of structural damage, and improving physical function in adult patients with moderately to severely active rheumatoid arthritis (RA).
2. Reducing signs and symptoms of moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA) in patients 2 years of age and older.
3. Reducing signs and symptoms, inhibiting the progression of structural damage, and improving physical function in adult patients with active psoriatic arthritis (PsA).
4. Reducing signs and symptoms in adult patients with active ankylosing spondylitis (AS).
5. The treatment of moderately to severely active Crohn's disease in adult and pediatric patients 6 years of age and older.
6. The treatment of moderately to severely active ulcerative colitis in adults and pediatric patients 5 years of age and older.
7. The treatment of adult patients with moderate to severe chronic plaque psoriasis who are candidates for systemic therapy or phototherapy, and when other systemic therapies are medically less appropriate.
8. The treatment of moderate to severe hidradenitis suppurativa in patients 12 years of age and older.
9. The treatment of non-infectious intermediate, posterior, and panuveitis in adults and pediatric patients 2 years of age and older.

B. Compendial Uses

Axial spondyloarthritis
Behcet's disease
Pyoderma gangrenosum
Oligoarticular juvenile idiopathic arthritis

All other indications are considered experimental/investigational and not medically necessary.

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II. CRITERIA FOR INITIAL APPROVAL

For all indications:

- Submission of the member's chart or medical record is required, documenting medical necessity based on the criteria corresponding to the applicable indication; AND
- Adalimumab will not be used concomitantly with an injectable biologic response modifier including TNF-inhibitors (e.g., Enbrel (etanercept), Remicade (infliximab), etc.) and IL-inhibitors (e.g., Cosentyx (secukinumab), Stelara (ustekinumab), Tremfya (guselkumab), Ilumya (tildrakizumab), Skyrizi (risankizumab), Bimzelx (bimekizumab), Omvoh (mirikizumab), etc.) or other oral non-biologic agent (e.g., Otezla (apremilast), Xeljanz (tofacitinib), Olumiant (baricitinib), Rinvoq (upadacitinib), Velsipity (etrasimod), etc.); AND
- Member has had a documented negative TB test (which can include a tuberculosis skin test [PPD], an interferon-release assay [IGRA], or a chest x-ray)* within 6 months of initiating therapy for persons who are naïve to biologic DMARDs or targeted synthetic DMARDs associated with an increased risk of TB
- Formulary adalimumab biosimilar will pay within the quantity limit if there is at least one paid claim within the last 365 days for a biologic (e.g., Bimzelx, Cosentyx, Otezla, Rinvoq, Skyrizi, Taltz, Tremfya, etc.)

* If the screening testing for TB is positive, there must be further testing to confirm there is no active disease. Do not administer the requested medication to members with active TB infection. If there is latent disease, TB treatment must be started before initiation of the requested medication.

A. Moderately to severely active rheumatoid arthritis (RA)

1. Authorization of 12 months may be granted for treatment of moderately to severely active RA when all of the following criteria are met:
 - a. Adalimumab is prescribed by, or in consultation with, a specialist in rheumatology.
 - b. Documentation that the member meets either of the following criteria:
 - i. Member has been tested for either of the following biomarkers and the test was positive:
 1. Rheumatoid factor (RF)
 2. Anti-cyclic citrullinated peptide (anti-CCP)
 - ii. Member has been tested for ALL of the following biomarkers:
 1. RF
 2. Anti-CCP
 3. C-reactive protein (CRP) and/or erythrocyte sedimentation rate (ESR)
 - c. Documentation that the member meets either of the following:
 - i. Member has experienced an inadequate response to at least a 3-month trial of methotrexate despite adequate dosing (i.e., titrated to 20 mg/week).
 - ii. Member has an intolerance or contraindication to methotrexate (see Appendix A).

B. Moderately to severely active articular juvenile idiopathic arthritis

1. Prescribed by, or in consultation with, a specialist in rheumatology.
2. Authorization of 12 months may be granted for members with documentation of having previously received a biologic indicated for moderately to severely active articular juvenile idiopathic arthritis.
3. Authorization of 12 months may be granted for treatment of moderately to severely active articular juvenile idiopathic arthritis when any of the following criteria is met:

- a. Documentation that the member has had an inadequate response to methotrexate or another non-biologic DMARD administered at an adequate dose and duration.
- b. Documentation that the member has risk factors (See Appendix E) and the member also meets one of the following:
 - i. High-risk joints are involved (e.g., cervical spine, wrist, or hip).
 - ii. High disease activity.
 - iii. Are judged to be at high risk for disabling joint disease.

C. Active psoriatic arthritis (PsA)

Authorization of 12 months may be granted for treatment of active psoriatic arthritis (PsA) when adalimumab is prescribed by, or in consultation with, a specialist in dermatology or rheumatology.

D. Active ankylosing spondylitis (AS) and axial spondyloarthritis

1. Prescribed by, or in consultation with, a specialist in rheumatology.
2. Authorization of 12 months may be granted for members with documentation of having previously received a biologic indicated for treatment of active ankylosing spondylitis or axial spondyloarthritis.
3. Authorization of 12 months may be granted for treatment of active ankylosing spondylitis and axial spondyloarthritis when any of the following criteria with documentation is met:
 - a. Member has experienced an inadequate response to at least two non-steroidal anti-inflammatory drugs (NSAIDs).
 - b. Member has an intolerance or contraindication to two or more NSAIDs.

E. Moderately to severely active Crohn's disease (CD)

1. Prescribed by, or in consultation with, a specialist in gastroenterology.
2. Authorization of 12 months may be granted for members with documentation of moderate to severe Crohn's disease

F. Moderately to severely active ulcerative colitis (UC)

1. Prescribed by, or in consultation with, a specialist in gastroenterology.
2. Authorization of 12 months may be granted for members who have documentation of moderate to severe ulcerative colitis

G. Moderate to severe chronic plaque psoriasis (PsO)

1. Prescribed by, or in consultation with, a specialist in dermatology.
2. Authorization of 12 months may be granted for treatment of moderate to severe chronic plaque psoriasis when all of the following criteria with documentation are met:
 - a. At least 10% of body surface area (BSA) OR crucial body areas (e.g., hands, feet, face, neck, scalp, genitals/groin, intertriginous areas) are affected.
 - b. Member meets any of the following criteria:
 - i. Member has had an inadequate response or intolerance to either phototherapy (e.g., UVB, PUVA) or a pharmacologic treatment with methotrexate, cyclosporine or acitretin.
 - ii. Member has a clinical reason to avoid pharmacologic treatment with methotrexate, cyclosporine and acitretin (see Appendix D).
 - iii. Member has severe psoriasis that warrants a biologic DMARD as first-line therapy (i.e. at least 10% of the body surface area (BSA) or crucial body areas (e.g., hands, feet, face, neck, scalp, genitals/groin, intertriginous areas) are affected).

H. Moderate to severe hidradenitis suppurativa

1. Prescribed by, or in consultation with, a specialist in dermatology.
2. Authorization of 12 months may be granted for members with documentation of having previously received a biologic indicated for treatment of moderate to severe hidradenitis suppurativa
2. Authorization of 12 months may be granted for treatment of moderate to severe hidradenitis suppurativa when either of the following with documentation is met:
 - a. Member has experienced an inadequate response to oral antibiotics for at least 90 days.
 - b. Member has an intolerance or contraindication to oral antibiotics.

I. Uveitis (non-infectious intermediate, posterior and panuveitis)

1. Authorization of 12 months may be granted for members with documentation of having previously received a biologic indicated for intermediate, posterior, and panuveitis.
2. Authorization of 12 months may be granted for treatment of non-infectious intermediate, posterior and panuveitis when either of the following with documentation is met:
 - a. Member has experienced an inadequate response with corticosteroids or immunosuppressive medications (e.g., azathioprine, cyclosporine, methotrexate).
 - b. Member has an intolerance or contraindication to corticosteroids and immunosuppressive therapy (e.g., azathioprine, cyclosporine, methotrexate).

J. Behcet's disease

1. Authorization of 12 months may be granted for members with documentation of having previously received Otezla or a biologic indicated for the treatment of Behcet's disease.
2. Authorization of 12 months may be granted for the treatment of Behcet's disease when the member has documentation of an inadequate response to at least one nonbiologic medication for Behcet's disease (e.g., apremilast, colchicine, systemic glucocorticoids, azathioprine).

K. Pyoderma gangrenosum

1. Authorization of 12 months may be granted for members with documentation of having who have previously received a biologic indicated for treatment of pyoderma gangrenosum.
2. Authorization of 12 months may be granted for treatment of pyoderma gangrenosum when either of the following is met:
 - a. Member has experienced an inadequate response to corticosteroids or immunosuppressive therapy (e.g., cyclosporine or mycophenolate mofetil).
 - b. Member has an intolerance or contraindication to corticosteroids and immunosuppressive therapy (e.g., cyclosporine, mycophenolate mofetil).

III. CONTINUATION OF THERAPY

Formulary adalimumab biosimilar will continue to within the quantity limit pay after the initial approval if there is at least one paid claim within the last 365 days for adalimumab or another biologic (e.g., Bimzelx, Cosentyx, Otezla, Rinvoq, Skyrizi, Taltz, Tremfya, etc.).

A. Moderately to severely active rheumatoid arthritis (RA)

Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for moderately to severely active rheumatoid arthritis and who achieve or maintain a

positive clinical response as evidenced by disease activity improvement of at least 20% from baseline in tender joint count, swollen joint count, pain, or disability.

B. Moderately to severely active articular juvenile idiopathic arthritis

Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for moderately to severely active articular juvenile idiopathic arthritis and who achieve or maintain a positive clinical response as evidenced by low disease activity or improvement in signs and symptoms of the condition when there is improvement in any of the following from baseline:

1. Number of joints with active arthritis (e.g., swelling, pain, limitation of motion)
2. Number of joints with limitation of movement
3. Functional ability

C. Active psoriatic arthritis (PsA)

Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for active psoriatic arthritis and who achieve or maintain a positive clinical response as evidenced by low disease activity or improvement in signs and symptoms of the condition when there is improvement in any of the following from baseline:

1. Number of swollen joints
2. Number of tender joints
3. Dactylitis
4. Enthesitis
5. Skin and/or nail involvement

D. Active ankylosing spondylitis (AS) and active axial spondyloarthritis

Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for active ankylosing spondylitis or active axial spondyloarthritis and who achieve or maintain positive clinical response with the requested medication as evidenced by low disease activity or improvement in signs and symptoms of the condition when there is improvement in any of the following from baseline:

1. Functional status
2. Total spinal pain
3. Inflammation (e.g., morning stiffness)

E. Moderately to severely active Crohn's disease

1. Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for moderately to severely active Crohn's disease and who achieve or maintain remission.
2. Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for moderately to severely active Crohn's disease and who achieve or maintain a positive clinical response as evidenced by low disease activity or improvement in signs and symptoms of the condition when there is improvement in any of the following from baseline:
 - i. Abdominal pain or tenderness
 - ii. Diarrhea
 - iii. Body weight
 - iv. Abdominal mass
 - v. Hematocrit

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- vi. Endoscopic appearance of the mucosa
- vii. Improvement on a disease activity scoring tool (e.g., Crohn's Disease Activity Index [CDAI] score)

F. Moderately to severely active ulcerative colitis

1. Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for moderately to severely active ulcerative colitis and who achieve or maintain remission.
2. Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for moderately to severely active ulcerative colitis and who achieve or maintain a positive clinical response as evidenced by low disease activity or improvement in signs and symptoms of the condition when there is improvement in any of the following from baseline:
 - i. Stool frequency
 - ii. Rectal bleeding
 - iii. Urgency of defecation
 - iv. C-reactive protein (CRP)
 - v. Fecal calprotectin (FC)
 - vi. Endoscopic appearance of the mucosa
 - vii. Improvement on a disease activity scoring tool (e.g., Ulcerative Colitis Endoscopic Index of Severity [UCEIS], Mayo score)

G. Moderate to severe plaque psoriasis

Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for moderate to severe plaque psoriasis and who achieve or maintain a positive clinical response as evidenced by low disease activity or improvement in signs and symptoms of the condition when any of the following is met:

1. Reduction in body surface area (BSA) affected from baseline
2. Improvement in signs and symptoms from baseline (e.g., itching, redness, flaking, scaling, burning, cracking, pain)

H. Moderate to severe hidradenitis suppurativa

Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for moderate to severe hidradenitis suppurativa and who achieve or maintain a positive clinical response as evidenced by low disease activity or improvement in signs and symptoms of the condition when any of the following is met:

1. Reduction in abscess and inflammatory nodule count from baseline
2. Reduced formation of new sinus tracts and scarring
3. Decrease in frequency of inflammatory lesions from baseline
4. Reduction in pain from baseline
5. Reduction in suppuration from baseline
6. Improvement in frequency of relapses from baseline
7. Improvement in quality of life from baseline
8. Improvement on a disease severity assessment tool from baseline

I. Uveitis (non-infectious intermediate, posterior and panuveitis)

Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for non-infectious intermediate, posterior, and panuveitis and who achieve or maintain a

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positive clinical response as evidenced by low disease activity or improvement in signs and symptoms of the condition when the patient meets any of the following:

1. Reduced frequency of disease flares compared to baseline
2. Stability or improvement in anterior chamber (AC) cell grade compared to baseline
3. Stability or improvement in vitreous haze (VH) grade compared to baseline
4. Stability or improvement in visual acuity compared to baseline
5. Reduction in glucocorticoid requirements from baseline
6. No new active inflammatory chorioretinal and/or inflammatory retinal vascular lesions relative to baseline

All other indications

Authorization of 12 months may be granted for all members (including new members) who are using the requested medication for an indication outlined in Section III and who achieve or maintain a positive clinical response with the requested medication as evidenced by low disease activity or improvement in signs and symptoms of the condition.

IV. QUANTITY LIMIT

Drug Name	Quantity Limit	Daily Dose Quantity Limit
Hadlima (adalimumab-bwwd) 40mg/0.4 ml	1.6 ml per 28 days (4 per 28 days)	0.06
Hadlima (adalimumab-bwwd) 40mg/0.8 ml	3.2 ml per 28 days (4 per 28 days)	0.12
adalimumab-adaz 40mg/0.4 ml	1.6 ml per 28 days (4 per 28 days)	0.06
adalimumab-adaz 80mg/0.8 ml	1.6 ml per 28 days (2 per 28 days)	0.06
adalimumab-fkjp 20mg/0.4 ml	2 per 28 days	0.072
adalimumab-fkjp 40mg/0.8 ml	4 per 28 days	0.15

V. DOSING

The prescribed dose and quantity fall within the FDA-approved labeling or within compendia supported dosing guidelines

FDA-recommended dosing
RA/PsA/AS <ul style="list-style-type: none"> • 40 mg every other week • For patients not taking concomitant methotrexate: may increase to 40 mg every week if needed PJIA/Pediatric uveitis (2 years and up) <ul style="list-style-type: none"> • 10 kg to < 15 kg: 10 mg every other week • 15 kg to < 30 kg: 20 mg every other weeks • ≥ 30 kg: 40 mg every other week

FDA-recommended dosing

Pediatric CD (6 years and up)

- 17 kg to < 40 kg: loading doses of 80 mg on day 1 and 40 mg two weeks later (day 15); maintenance dose (starting at week 4 (day 29) of 20 mg every other week
- ≥ 40 kg: loading doses of 160 mg on day 1 (given in one day or split over two consecutive days) and 80 mg two weeks later (day 15); maintenance dose starting at week 4 (day 29) of 40 mg every other week

Adult CD and UC

- Loading doses: 160 mg on day 1 (given in one day or split over two consecutive days), followed by 80 mg two weeks later (day 15)
- Maintenance dose: two weeks later (day 29), 40 mg every other week

Plaque psoriasis/ uveitis

- 80 mg, followed by 40 mg every other week starting one week after the initial dose of 80 mg

Adolescent hidradenitis suppurativa (12 years and up)

- 30 kg to < 60 kg: 80 mg on day 1, 40 mg on day 8 and subsequent doses 40 mg every other week
- ≥ 60 kg: Follow adult dosing

Adult hidradenitis suppurativa

- Loading doses: 160 mg on day 1 (given in one day or split over two consecutive days), followed by 80 mg two weeks later (day 15)
- Maintenance dose: begin 40 mg every week two weeks later (day 29)

Abbreviations: RA = rheumatoid arthritis; PsA = psoriatic arthritis; AS = ankylosing spondylitis; PJIA = polyarticular juvenile idiopathic arthritis; CD = Crohn's disease; UC = ulcerative colitis

VI. APPENDICES

Appendix A: Examples of Contraindications to Methotrexate

1. Alcoholism, alcoholic liver disease or other chronic liver disease
2. Breastfeeding
3. Blood dyscrasias (e.g., thrombocytopenia, leukopenia, significant anemia)
4. Elevated liver transaminases
5. History of intolerance or adverse event
6. Hypersensitivity
7. Interstitial pneumonitis or clinically significant pulmonary fibrosis
8. Myelodysplasia
9. Pregnancy or planning pregnancy
10. Renal impairment
11. Significant drug interaction

Appendix D: Examples of Clinical Reasons to Avoid Pharmacologic Treatment with Methotrexate, Cyclosporine or Acitretin.

1. Alcoholism, alcoholic liver disease or other chronic liver disease

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2. Breastfeeding
3. Drug interaction
4. Cannot be used due to risk of treatment-related toxicity
5. Pregnancy or planning pregnancy
6. Significant comorbidity prohibits use of systemic agents (examples include liver or kidney disease, blood dyscrasias, uncontrolled hypertension)

APPENDIX E: Risk factors for Articular Juvenile Idiopathic Arthritis

1. Positive rheumatoid factor
2. Positive anti-cyclic citrullinated peptide antibodies
3. Pre-existing joint damage

VII. REFERENCES

1. Hadlima (adalimumab-bwvd) [package insert]. Jersey City, NJ: Organon & Co.; July 2023.
2. Hulio (adalimumab-fkjp) [package insert]. Morgantown, WV: Mylan; December 2023.
3. Hyrimoz (adalimumab-adaz) [package insert]. Princeton, NJ: Sandoz; June 2023.
4. van der Heijde D, Ramiro S, Landewe R, et al. 2016 Update of the international ASAS-EULAR management recommendations for axial spondyloarthritis. *Ann Rheum Dis*. 2017;0:1-14.
5. Sieper J, van der Heijde D, Dougados M, et al. Efficacy and safety of adalimumab in patients with non-radiographic axial spondyloarthritis: results of a randomised placebo-controlled trial (ABILITY-1). *Ann Rheum Dis*. 2013;72(6):815-22.
6. Smolen JS, Landewé R, Billsma J, et al. EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease-modifying antirheumatic drugs: 2016 update. *Ann Rheum Dis*. 2017;0:1-18.
7. Singh JA, Saag KG, Bridges SL Jr, et al. 2015 American College of Rheumatology Guideline for the Treatment of Rheumatoid Arthritis. *Arthritis Rheumatol*. 2016;68(1):1-26.
8. Saag KG, Teng GG, Patkar NM, et al. American College of Rheumatology 2008 recommendations for the use of nonbiologic and biologic disease-modifying antirheumatic drugs in rheumatoid arthritis. *Arthritis Rheum*. 2008;59(6):762-784.
9. Beukelman T, Patkar NM, Saag KG, et al. 2011 American College of Rheumatology recommendations for the treatment of juvenile idiopathic arthritis: initiation and safety monitoring of therapeutic agents for the treatment of arthritis and systemic features. *Arthritis Care Res*. 2011;63(4):465-482.
10. Gossec L, Smolen JS, Ramiro S, et al. European League Against Rheumatism (EULAR) recommendations for the management of psoriatic arthritis with pharmacological therapies; 2015 update. *Ann Rheum Dis*. 2016;75(3):499-510.
11. Gladman DD, Antoni C, P Mease, et al. Psoriatic arthritis: epidemiology, clinical features, course, and outcome. *Ann Rheum Dis* 2005;64(Suppl II):ii14–ii17.
12. Peluso R, Lervolino S, Vitiello M, et al. Extra-articular manifestations in psoriatic arthritis patients. *Clin Rheumatol*. 2014 May 8. [Epub ahead of print].
13. Menter A, Korman NJ, Elmets CA, et al. Guidelines of care for the management of psoriasis and psoriatic arthritis. Section 6: Guidelines of care for the treatment of psoriasis and psoriatic arthritis: case-based presentations and evidence-based conclusions. *J Am Acad Dermatol*. 2011;65(1):137-174.
14. Braun J, van den Berg R, Baraliakos X, et al. 2010 update of the ASAS/EULAR recommendations for the management of ankylosing spondylitis. *Ann Rheum Dis* 2011;70:896–904.
15. Ward MM, Deodhar A, Akl EA, et al. American College of Rheumatology/Spondylitis Association of America/Spondyloarthritis Research and Treatment Network 2015 recommendations for

- the treatment of ankylosing spondylitis and nonradiographic axial spondyloarthritis. *Arthritis Rheumatol*. 2015: 10.1002/art.39298. [Epub ahead of print].
16. Talley NJ, Abreu MT, Achkar J, et al. An evidence-based systematic review on medical therapies for inflammatory bowel disease. *Am J Gastroenterol*. 2011;106(Suppl 1):S2-S25.
 17. Lichtenstein GR, Loftus Jr EV, Isaacs KI, et al. ACG Clinical Guideline: Management of Crohn's Disease in Adults. *Am J Gastroenterol*. 2018;113:481-517.
 18. Agarwal A, Andrews JM. Systematic review: IBD-associated pyoderma gangrenosum in the biologic era, the response to therapy. *Aliment Pharmacol Ther*. 2013;38(6):563-572.
 19. Arguelles-Arias F, Castro-Laria L, Lobaton T, et al. Characteristics and treatment of pyoderma gangrenosum in inflammatory bowel disease. *Dig Dis Sci*. 2013;58(10):2949-2954.
 20. Marzano AV, Ishak RS, Saibeni S, et al. Autoinflammatory skin disorders in inflammatory bowel diseases, pyoderma gangrenosum and Sweet's syndrome: A comprehensive review and disease classification criteria. *Clin Rev Allergy Immunol*. 2013;45(2):202-210.
 21. Hatemi G, Christensen R, Bodaghi, et al. 2018 update of the EULAR recommendations for the management of Behcet's syndrome. *Ann Rheum Dis*. 2018.; 77: 808-818.
 22. Menter A, Strober BE, Kaplan DH, et al. Joint AAD-NPF guidelines of care for the management and treatment of psoriasis with biologics. *J Am Acad Dermatol*. 2019;80(4):1029-1072.
 23. Tuberculosis (TB). TB risk factors. Centers for Disease Control and Prevention. Retrieved on 21 June 2019 from: <https://www.cdc.gov/tb/topic/basics/risk.htm>.